

MEMBRANE FOR MICRO-ELECTRO-MECHANICAL
SWITCH, AND METHODS OF MAKING AND USING IT

ABSTRACT OF THE DISCLOSURE

A micro-electro-mechanical switch (10, 110, 210) is known as a MEMS, and includes a base section (13, 14, 17-18) having two spaced conductive posts (17, 18). A conductive part (22) is provided between the posts, and is covered by a dielectric layer (23). A membrane (31, 131, 231) extends between the posts and has spaced expansion sections (41-42, 141-142, 241-242) which facilitate lengthwise expansion of the membrane as it flexes between positions in which a central portion thereof is respectively spaced from and engaging the dielectric layer. A method of making the switch includes providing a spacer material (76, 176, 177, 178) with a top surface having grooves or ridges that correspond to the expansion sections, depositing the membrane over the top surface of the spacer, and then removing the spacer material.